

WHAT IS CLAIMED IS:

1. A method comprising:  
    setting a plurality of packet type filters so that each filters for a different packet type;  
    incrementing a plurality of buckets, each bucket communicatively coupled to a packet type filter of the plurality of filters;  
    receiving a packet having a packet type;  
    measuring the bucket that is coupled to the packet type filter that filters for the received packet type; and  
    transmitting the packet if its measured bucket is above a threshold value.
2. The method of claim 1, further comprising dropping the packet if the measured bucket is below a threshold value.
3. The method of claim 1, further comprising decrementing the measured bucket if the packet is transmitted.
4. The method of claim 3, wherein the decrementing decrements the measured bucket by a length of the transmitted packet.
5. The method of claim 3, wherein the decrementing decrements the measured bucket by a token.

6. The method of claim 1, wherein the buckets are each incremented at different rates.
7. The method of claim 1, wherein a maximum value for each bucket is different.
8. The method of claim 1, wherein a first packet type includes unicast and a second packet type includes multicast and broadcast.
9. The method of claim 1, wherein a first packet type includes packets having a first QOS level and a second packet type includes packets having a second QOS level.
10. A system, comprising:
  - means for setting a plurality of packet type filters so that each filters for a different packet type;
  - means for incrementing a plurality of buckets, each bucket communicatively coupled to a packet type filter of the plurality of filters;
  - means for receiving a packet having a packet type;
  - means for measuring the bucket that is coupled to the packet type filter that filters for the received packet type; and
  - means for transmitting the packet if the measured bucket is above a threshold value.
11. A system, comprising:

a packet receiving engine, capable of receiving packets of at least a first and second type;

a plurality of buckets, each communicatively coupled to the packet receiving engine, each communicatively coupled to a packet type filter of plurality of packet type filters, each packet type filter capable of being set to filter at least one packet type;

a bucket updating engine, communicatively coupled to the packet receiving engine, capable of incrementing a first bucket and a second bucket;

a packet handling engine, communicatively coupled to the packet receiving engine, capable of measuring the bucket coupled to the packet type filter that filters for the type of packet received and capable of transmitting the received packet if the measured bucket is above a threshold value.

12. The system of claim 11, wherein the packet handling engine is further capable of dropping the packet if its measured bucket is below a threshold value.

13. The system of claim 11, wherein the bucket updating engine is further capable of decrementing the measured bucket if the packet is transmitted.

14. The system of claim 13, wherein the bucket updating engine decrements the measured bucket by a length of the transmitted packet.

15. The system of claim 13, wherein the bucket updating engine decrements the measured bucket by a token.

16. The system of claim 13, wherein the bucket updating engine increments each bucket at different rates.
17. The system of claim 11, wherein a maximum value for each bucket is different.
18. The system of claim 11, wherein the first packet type includes unicast and the second packet type includes multicast and broadcast.
19. The system of claim 11, wherein the first packet type includes packets having a first QOS level and the second packet type includes packets having a second QOS level.